

Work Order ID 145337

Thursday, May 05, 2016 1:38:36 PM

145337

Page 1

Item ID: D119-796-251

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: AFT Crosstube Installation with Step (no hardware)

Start Date: 5/30/2016 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 6/9/2016 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: MCS Date: MAY 06 2016

Tooling:

Date:

Run Start ***NR1***

QC: _____ Date: _____

SPC (Y/N): _____

Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
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D119-796-251	D
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110 Document Control

0.00

110

DC

Memo

0.00

Doc.Control -USB or Paperwork

Photocopy bluefile and create labels as per PPP D119-796-251 chg 002

N/A120 Pick Kit
Packaging

0.00

120

Packaging

Memo

0.00

Packaging

DAS

41

9-89

16-7-7

130 Crosstubes

0.00

130

Crosstubes

Memo

0.46

Crosstubes

1- Install step and clamp with the proper position per dwg D119-796-251

DAS

41

9-89

16-7-7

Torque all clamps to 50 IN-LBS max.

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause				FAULT CATEGORY					
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER : _____							

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145337

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Item ID: D119-796-251 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: AFT Crosstube Installation with Step (no hardware)
 Start Date: 5/30/2016 Start Qty: 1.00 ***1*** Cust Item ID:
 Required Date: 6/9/2016 Req'd Qty: 1.00 ***1*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140	QC5- Inspect part completeness to step on W/O	0.00							DAS 38 9-89 JUL 07 2016
140									
QC	Memo	0.02							
Quality Control	***RE-CHECK TORQUE ON CLAMP AS PER DWG.***								
	***VERIFY BY <u>38</u> BATCH # TO MATCH W/O								
	<u>145337</u> <u>0-89</u>								
	***VERIFY BY <u>38</u> PART # TO MATCH								
	W/O <u>145337</u> <u>9-89</u>								
150		0.00							DAS 41 9-89 16-7-7
150	Packaging								
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP D119-796-251								
	For final assembly								
160	QC21- Final Inspection - Work Order Release	0.00							
160									
QC	Memo	0.10							
Quality Control									

38 7/7/16

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

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Work Order ID: 145337

145337

Parent Item: D119-796-251

D119-796-251

Parent Item Name: AFT Crosstube Installation with Step (no hardware)

Start Date: 5/30/2016

Required Date: 6/9/2016

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 14.09.09 NEW ISSUE DD VERF:JLM IPP REV:B
14.10.15 AS PER REV.A DD VERF:JLM IPP REV:C 14.11.19
AS PER REV.C DD VERF:JLM IPP REV:D 14.12.09 AS PER
REV.PC6 DD VERF:JLM IPP REV:E 15.02.11 AS PER REV D
JLM VERF:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D119-796-241		Manufactured	No				Each	0.0000		1		DAS 41 9-89	16-6-16
D119-796-241					145284				**	1			
AFT Crosstube Installation without Step (no hardware)													
D5123-3		Manufactured	No				Each	64.0000		4		DAS 41 9-89	16-6-16
D5123-3									**				
Clamp Cushion													
					<u>Location</u>			<u>Loc Qty</u>		<u>Loc Code</u>			
					LG055			64					
					141331			8					
					144626			56		4			
D5149-043		Manufactured	No				Each	6.0000		2		DAS 41 9-89	16-6-28
D5149-043									**				
Aft Step Base Assembly										2			
					<u>Location</u>			<u>Loc Qty</u>		<u>Loc Code</u>			
					LG055			6					
					142591			6					

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
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Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

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Work Order ID: 145337

145337

Parent Item: D119-796-251

D119-796-251

Parent Item Name: AFT Crosstube Installation with Step (no hardware)

Start Date: 5/30/2016

Required Date: 6/9/2016

Start Qty: 1.00

Required Qty: 1.00

MS21920-25

Purchased

No

Each

32.0000

4

DAS

MS21920-25

41

9.89

16-6-16

Clamp

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>	
FG	10		2
120920	10		3 → 1 Scrap
LG050	14		
m134588	14		
LG057	8		
m134507	8		

DQA: _____ Date: _____



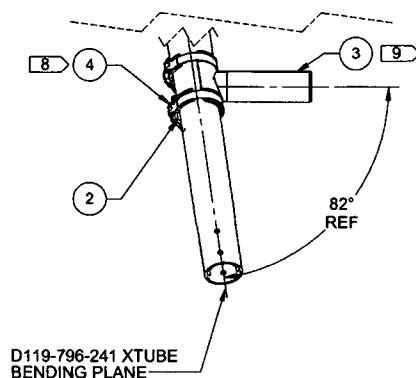
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

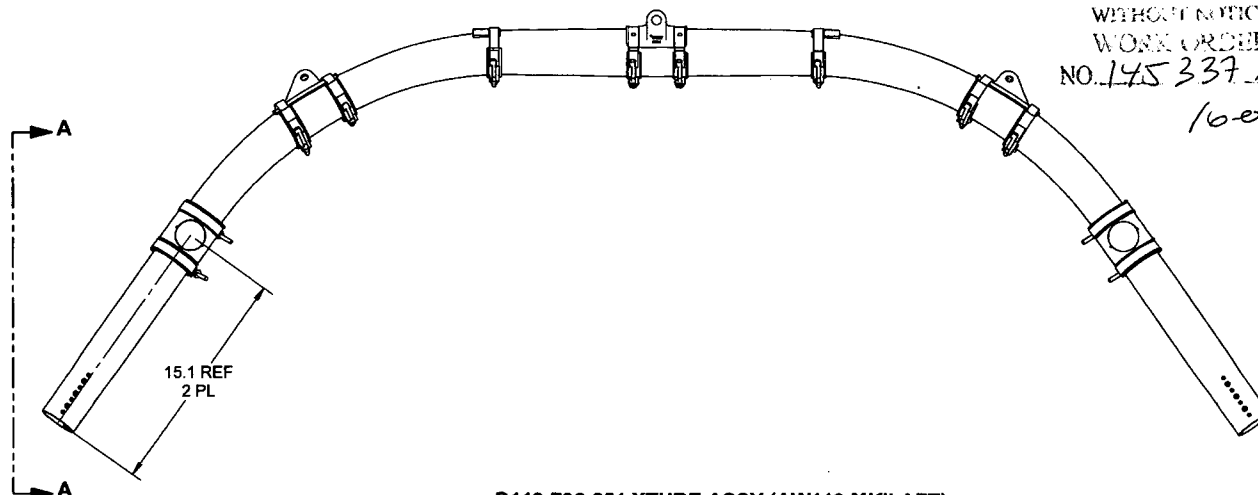
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Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
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LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : ☐							
Misidentified ☐	Past Due ☐								

ITEM	QTY -251	P/N	DESCRIPTION
	X	D119-796-251	XTUBE ASSY (AW119 MKII AFT)
1	1	D119-796-241	XTUBE ASSY (AW119 MKII AFT)
2	4	D5123-3	CUSHION
3	2	D5149-043	AFT STEP ASSY
4	4	MS21920-25	CLAMP



D119-796-241 XTUBE
BENDING PLANE

SECTION A-A



D119-796-251 XTUBE ASSY (AW119 MKII AFT)

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 145337 MJS
16-05-06

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY PER DART QSI 044 METHOD 6.5
- 7) WEIGHT: 29.9 lbs
- 8) TORQUE MS21920-25 CLAMPS TO 50 IN-LBS MAX
- 9) LOCATE STEP USING POST FITTING ON CROSSTUBE

RELEASED

2015 FEB 09

ECN 15-516

DESIGN	AP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AP		
CHECKED	DB	DRAWING NO.	REV. D
MFG. APPR.	DD	D119-796-251	SHEET 1 OF 1
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	XTUBE ASSY (AW119 MKII AFT)	NTS
DATE	15.01.19	COPYRIGHT © 2014 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

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